```
==============================================================
Sequence Listing was accepted with existing errors.
See attached Validation Report.
If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).
Reviewer: Anne Corrigan
Timestamp: Wed Aug 08 14:48:18 EDT 2007
==============================================================
```

Application No:      10592919          Version No:      1.0

**Input Set:**

**Output Set:**

|  |  |
|---|---|
| **Started:** | 2007-07-31 20:39:04.228 |
| **Finished:** | 2007-07-31 20:39:05.905 |
| **Elapsed:** | 0 hr(s) 0 min(s) 1 sec(s) 677 ms |
| **Total Warnings:** | 46 |
| **Total Errors:** | 6 |
| **No. of SeqIDs Defined:** | 48 |
| **Actual SeqID Count:** | 48 |

| Error code | | Error Description |
|---|---|---|
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (1) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (2) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (3) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (5) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (6) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (7) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (8) |
| E | 249 | Order Sequence Error <210> -> <220>; Expected Mandatory Tag: <211> in SEQID ( 9 ) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (10) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (11) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (12) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (13) |
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| W | 213 | Artificial or Unknown found in <213> in SEQ ID (15) |
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| W | 213 | Artificial or Unknown found in <213> in SEQ ID (17) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (18) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (19) |
| W | 213 | Artificial or Unknown found in <213> in SEQ ID (20) |

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          Input Set:


          Output Set:



             Started:   2007-07-31 20:39:04.228
            Finished:   2007-07-31 20:39:05.905
             Elapsed:   0 hr(s) 0 min(s) 1 sec(s) 677 ms
      Total Warnings:   46
        Total Errors:   6
  No. of SeqIDs Defined:   48
    Actual SeqID Count:   48
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| Error code | Error Description |
|------------|------------------|
| W  213 | Artificial or Unknown found in <213>  in SEQ ID (21) |
| W  213 | Artificial or Unknown found in <213>  in SEQ ID (22)<br> This error has occured more than 20 times, will not be displayed |
| E  342 | 'n' position not defined  found at POS:  5 SEQID(27) |
| E  342 | 'n' position not defined  found at POS:  15 SEQID(27) |
| E  342 | 'n' position not defined  found at POS:  6 SEQID(48) |
| E  342 | 'n' position not defined  found at POS:  16 SEQID(48) |
| E  250 | Structural Validation Error; Sequence listing may not be indexable |

SEQUENCE LISTING

<110> Michael, T. Migawa

     Walter F. Lima

     Eric E. Swayze

     Joshua Nichols

     Hongjiang Wu

     Thazha P. Prakash

     Tadeusz Krzysztof Wyrzykiewicz

     Balkrishen Bhat

     Stanley T. Crooke

<120> COMPOSITIONS AND METHODS FOR OPTIMIZING
     CLEAVAGE OF RNA BY RNASE H

<130> CORE0037USA

<150> PCT/US2005/008428
<151> 2005-03-15

<150> 60/609,516
<151> 2004-09-13

<150> 60/567,016
<151> 2004-04-29

<150> 60/553,646
<151> 2004-03-15

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<210> 2
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<400> 2
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<220>
<223> Synthetic oligonucleotide

<400> 5
atgacaatca tgttgcagca attc                                    24

<210> 6
<211> 25
<212> DNA
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<220>
<223> Synthetic oligonucleotide

<400> 6
cgatgcaata aatatgcaca aatca                                   25

<210> 7
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
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<400> 7
ctgtaaagct ggaaagggac ggactggt                                28

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 8
ccttccctga aggttcctcc                                         20

<210> 9

<220>

<400> 9
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<210> 10
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<212> RNA
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<220>
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<400> 10
cgcgaauucg cg                                                          12


<210> 11
<211> 12
<212> RNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 11
gcgcuuaagc gc                                                         12


<210> 12
<211> 19
<212> RNA
<213> Artificial Sequence

<220>
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<400> 12
cgagaggcgg acgggaccg                                                  19


<210> 13
<211> 21
<212> DNA
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<220>
<221> misc_feature
<222> 1-19
<223> Bases at these positions are RNA

<400> 13
cgagaggcgg acgggaccgt t                                               21


<210> 14
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<220>
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<220>
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<222> 1-19
<223> Bases at these positions are RNA

<400> 14
cggtcccgtc cgcctctcgt t                                               21

<210> 15
<211> 20
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<220>
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<220>
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<222> 4
<223> N = tetrafluoroindole

<400> 15
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<210> 16
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<212> DNA
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<220>
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<222> 5
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<400> 16
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<210> 17
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<222> 6
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<400> 17
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<210> 18
<211> 20
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<220>
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<222> 7
<223> N = tetrafluoroindole

<400> 18
ctgctancct ctggatttga                                                    20


<210> 19
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<222> 8
<223> N = tetrafluoroindole

<400> 19
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<210> 20
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<223> N = tetrafluoroindole

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ctgctagccn ctggatttga                                                    20


<210> 21
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<220>
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<220>
<221> misc_feature
<222> 5
<223> N = N-3-methyl-2'MOE-thymidine

<400> 21
ctgcnagcct ctggatttga                                                    20


<210> 22

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<223> N = tetrafluoroindole

<400> 22
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<210> 23
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<220>
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<222> 16
<223> N = tetrafluoroindole

<400> 23
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<210> 24
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<220>
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<400> 24
ctgctagcct ctggntttga                                           20


<210> 25
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<222> 14
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<400> 25
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<223> N = tetrafluoroindole

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<210> 27
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<223> N = tetrafluoroindole

<400> 27
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<210> 28
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<220>
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<223> N = N-3-methyl-2'MOE-thymidine

<400> 28
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<210> 29
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<213> Artificial Sequence

<220>
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<220>
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<222> 7
<223> N = 2'-ara-fluorothymidine or pseudouridine or
      2'-fluorothymidine or 2-thiouridine or
      2'-S-methylthymidine or 4'-methylthymidine or
      3'-methylthymidine

<400> 29
ctacgcnttc cacgcacagt                                        20


<210> 30
<211> 20
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<220>
<223> Synthetic oligonucleotide

<220>
<221> misc_feature
<222> 8
<223> 2'-ara-fluorothymidine or pseudouridine or
      2'-fluorothymidine or 2-thiouridine or
      2'-S-methylthymidine or 4'-methylthymidine or
      3'-methylthymidine

<400> 30
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<210> 31
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<213> Artificial Sequence

<220>
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<220>
<221> misc_feature
<222> 9
<223> 2'-ara-fluorothymidine or pseudouridine or
      2'-fluorothymidine or 2-thiouridine or
      2'-S-methylthymidine or 4'-methylthymidine or
      3'-methylthymidine or abasic nucleotide or 2,4-F-tolyl

<400> 31
ctacgcttnc cacgcacagt                                        20


<210> 32
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<220>
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<222> 10
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      2,4-F-tolyl

<400> 32
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<210> 33
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<220>
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<400> 33
ctacgctttc nacgcacagt                                              20


<210> 34
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<220>
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<220>
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      linker or adenine with pentyl linker or
      tetrahydrofuran or 4-Me-ben

<400> 34
ctacgctttc nccgcacagt                                              20


<210> 35
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<220>

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<223> 2'-ara-fluorocytidine

<400> 35
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<210> 36
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<213> Artificial Sequence

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<223> guanine with propyl linker or tetrahydrofuran or
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<400> 36
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<210> 37
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<223> Synthetic oligonucleotide

<220>
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<222> 15
<223> 2'-ara-fluorocytidine or cytidine with propyl
      linker or cytidine with butyl linker or cytidine
      with pentyl linker

<400> 37
ctacgctttc cacgnacagt                                          20


<210> 38
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<220>
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<223> N= Tetraflouroindole or N=
      2,3,4,5-tetraflourophenyl

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<210> 40
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      2,3,4,5-tetraflourophenyl

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<210> 41
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